TITLE 326 AIR POLLUTION CONTROL DIVISION

Final Rule
LSA Document #13-358(F)

DIGEST

Amends 326 IAC 1-3-4 concerning the national ambient air quality standards for the 2008 8-hour ozone standard, and the 2012 annual particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$) standard. Effective 30 days after filing with the Publisher.

HISTORY

Findings and Determination of the Commissioner Pursuant to IC 13-14-9-8: August 21, 2013, Indiana Register (DIN: 20130821-IR-326130358FDA).

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Date of Hearing: April 9, 2014.

326 IAC 1-3-4

SECTION 1. 326 IAC 1-3-4 IS AMENDED TO READ AS FOLLOWS:

326 IAC 1-3-4 Ambient air quality standards

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) All measurements of air quality that are expressed as mass per unit volume, other than for the particulate matter ($PM_{2.5}$) standards contained in subsection (b)(8) and lead (Pb) standards contained in subsection (b)(6), shall be corrected to a reference temperature of twenty-five (25) degrees Celsius and a reference pressure of seven hundred sixty (760) millimeters of mercury (one thousand thirteen and two-tenths (1,013.2) millibars), as micrograms per cubic meter ($\mu g/m^3$). Measurements of $PM_{2.5}$, for purposes of comparison to the standards contained in subsection (b)(8), and Pb, for purposes of comparison to the standards contained in subsection (b)(6), shall be reported based on actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.

(b) Ambient air quality standards are as follows:

(1) Sulfur oxides as sulfur dioxide (SO_2) requirements are as follows:

(A) For the primary one (1) hour ambient air quality standard, the maximum permissible ambient air quality level shall be seventy-five (75) parts per billion (ppb). The one (1) hour standard is attained when the three (3) year average of the annual ninety-ninth percentile of the daily maximum one (1) hour average concentration is less than or equal to seventy-five (75) ppb, as determined in accordance with 40 CFR 50, Appendix T* and measured in the ambient air as SO_2 by a reference method based on 40 CFR 50, Appendix A-1* or 40 CFR 50, Appendix A-2*, or an equivalent method designated in accordance with 40 CFR 53*.

(B) For the secondary standard, the following value shall represent the maximum permissible ambient air quality level: one thousand three hundred (1,300) $\mu g/m^3$ (five-tenths (0.5) ppm) maximum three (3) hour concentration not to be exceeded more than once per year. The three (3) hour averages shall be determined from successive nonoverlapping three (3) hour blocks starting at midnight each calendar day and shall be rounded to one (1) decimal place (fractional parts equal to or greater than five-hundredths (0.05) ppm shall be rounded up). Sulfur oxides shall be measured in the ambient air as SO_2 by the reference method described in 40 CFR 50, Appendix A-1* or 40 CFR 50, Appendix A-2*, or by an equivalent method designated in accordance with 40 CFR 53*. To demonstrate attainment, the second-highest three (3) hour average must be based upon hourly data that are at least seventy-five percent (75%) complete in each calendar quarter. A three (3) hour block average shall be considered valid if:

(i) all three (3) hourly averages for the three (3) hour period are available; or

(ii) only one (1) or two (2) hourly averages are available, but the three (3) hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of this

clause.

In all cases, the three (3) hour block average shall be computed as the sum of the hourly averages divided by three (3).

(C) SO_2 values may be converted to ppm using the conversion factor two thousand six hundred twenty (2,620) $\mu g/m^3$ = one (1) ppm.

(2) Total suspended particulates (TSP) requirements are as follows:

(A) For primary standards, the following values shall represent the maximum permissible ambient air quality levels:

(i) Seventy-five (75) $\mu g/m^3$ annual geometric mean.

(ii) Two hundred sixty (260) $\mu g/m^3$ maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(B) For secondary standards, the following value shall represent maximum permissible ambient air quality levels: one hundred fifty (150) $\mu g/m^3$ maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(3) Carbon monoxide (CO) requirements are as follows:

(A) For primary and secondary standards, the following values shall represent the maximum permissible ambient air quality levels:

(i) Ten (10) milligrams per cubic meter (mg/m^3) (ten thousand (10,000) $\mu g/m^3$) (nine (9) ppm) maximum eight (8) hour average concentration not to be exceeded more than once per year.

(ii) Forty (40) mg/m^3 (forty thousand (40,000) $\mu g/m^3$) (thirty-five (35) ppm) maximum one (1) hour average concentration not to be exceeded more than once per year.

(B) CO values may be converted to ppm using the conversion factor one thousand one hundred forty-five (1,145) $\mu g/m^3$ = one (1) ppm.

(4) Ozone (O_3) requirements are as follows:

(A) For the one (1) hour ozone standards, the level of the one (1) hour primary and secondary ambient air quality standards for ozone measured by a reference method based on 40 CFR 50, Appendix D* and designated in accordance with 40 CFR 53* is twelve-hundredths (0.12) ppm (two hundred thirty-five (235) $\mu g/m^3$). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above twelve-hundredths (0.12) ppm (two hundred thirty-five (235) $\mu g/m^3$) is equal to or less than one (1) as determined by 40 CFR 50, Appendix H*.

(B) For the eight (8) hour ozone standards, the:

(i) level of the eight (8) hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR 50, Appendix D* and designated in accordance with 40 CFR 53*, is ~~eight-hundredths (0.08)~~ **seventy-five thousandths (0.075)** ppm, daily maximum eight (8) hour average; and

(ii) eight (8) hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth highest daily maximum eight (8) hour average ozone concentration is less than or equal to ~~eight-hundredths (0.08)~~ **seventy-five thousandths (0.075)** ppm as determined in accordance with 40 CFR 50, Appendix ~~I*.~~ **P*.**

(C) O_3 values may be converted to ppm using the conversion factor one thousand nine hundred sixty-five (1,965) $\mu g/m^3$ = 1.0 ppm.

(5) Nitrogen dioxide (NO_2) requirements are as follows:

(A) For the primary one (1) hour ambient air quality standard, the maximum permissible ambient air quality level shall be one hundred (100) ppb, one (1) hour average concentration, measured in the ambient air as NO_2. The one (1) hour standard is attained when the three (3) year average of the annual ninety-eighth percentile of the daily maximum one (1) hour average concentration is less than or equal to one hundred (100) ppb, as determined in accordance with 40 CFR 50, Appendix S*.

(B) For the annual primary standard, the following value shall represent the maximum permissible ambient air quality level: one hundred (100) $\mu g/m^3$ (fifty-three thousandths (0.053) ppm) annual average concentration in a calendar year. The annual primary standard is attained when the annual average concentration in a calendar year is less than or equal to fifty-three (53) ppb, as determined in accordance with 40 CFR 50, Appendix S* for the annual standard.

(C) For the annual secondary standard, the following value shall represent the maximum permissible ambient air quality level: one hundred (100) $\mu g/m^3$ (fifty-three thousandths (0.053) ppm) annual arithmetic mean concentration in a calendar year. The secondary standard is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to fifty-three thousandths (0.053) ppm, rounded to three (3) decimal places (fractional parts equal to or greater than five ten-thousandths (0.0005) ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least seventy-five percent (75%) complete or upon data derived from manual methods that are at least seventy-five percent (75%) complete for the scheduled sampling days in each calendar quarter.

(D) NO_2 values may be converted to ppm using the conversion factor one thousand eight hundred eighty

(1,880) µg/m^3 = one (1) ppm.

(E) The levels of the standards shall be measured by:

(i) a reference based on 40 CFR 50, Appendix F*; or

(ii) an equivalent method designated in accordance with 40 CFR 53*.

(6) Pb: For primary and secondary standards, the following value shall represent the maximum permissible ambient air quality level: fifteen-hundredths (0.15) µg/m^3, arithmetic mean concentration over a three (3) month period. The standards are attained when the maximum arithmetic three (3) month mean concentration for a three (3) year period is less than or equal to fifteenth-hundredths (0.15) µg/m^3, as determined in accordance with 40 CFR 50, Appendix R* and measured in the ambient air as Pb by either:

(A) a reference method based on 40 CFR 50, Appendix G*, and designated in accordance with 40 CFR 53*; or

(B) an equivalent method designated in accordance with 40 CFR 53*.

(7) PM_{10}: For primary and secondary standards, the maximum permissible ambient air quality level is one hundred fifty (150) µg/m^3 maximum twenty-four (24) hour average concentration. The standards are attained when the expected number of days per calendar year with a twenty-four (24) hour average concentration above one hundred fifty (150) µg/m^3, as determined in accordance with 40 CFR 50, Appendix K,* is equal to or less than one (1).

(8) $PM_{2.5}$ **requirements are as follows:**

(A) For **the** primary ~~and secondary standards,~~ **annual standard,** the following ~~values~~ **value** shall represent the maximum permissible ambient air quality ~~levels: (A) Fifteen (15)~~ **level: twelve (12)** micrograms per cubic meter (µg/m^3) annual arithmetic mean concentration. The ~~standards are~~ **standard is** attained when the annual arithmetic mean concentration is less than or equal to ~~fifteen (15)~~ **twelve (12)** µg/m^3, as determined in accordance with 40 CFR 50, Appendix N*, **as amended by 78 FR 3277,** and measured in the ambient air as $PM_{2.5}$ by either:

(i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance with 40 CFR 53*; or

(ii) an equivalent method designated in accordance with 40 CFR 53*.

(B) For the secondary annual standard, the following value shall represent the maximum permissible ambient air quality level: fifteen (15) micrograms per cubic meter (µg/m^3) annual arithmetic mean concentration. The standard is attained when the annual arithmetic mean concentration is less than or equal to fifteen (15) µg/m^3, as determined in accordance with 40 CFR 50, Appendix N*, as amended by 78 FR 3277, and measured in the ambient air as $PM_{2.5}$ by either:

(i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance with 40 CFR 53*; or

(ii) an equivalent method designated in accordance with 40 CFR 53*.

~~(B)~~ **(C) For the primary and secondary 24-hour standard, the following value shall represent the maximum permissible ambient air quality level:** thirty-five (35) µg/m^3 twenty-four (24) hour average concentration. The standards are attained when the ninety-eighth percentile twenty-four (24) hour concentration is less than or equal to thirty-five (35) micrograms per cubic meter (µg/m^3), as determined in accordance with 40 CFR 50, Appendix N*, **as amended by 78 FR 3277,** and measured in the ambient air as $PM_{2.5}$ by either:

(i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance of 40 CFR 53*; or

(ii) an equivalent method designated in accordance with 40 CFR 53*.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of ~~Air Quality,~~ **Legal Counsel,** Indiana Government Center North, ~~Tenth~~ **Thirteenth** Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

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